

## CLAIMS:

1. A method for the computer-assisted visualization of a three-dimensional anatomical object, comprising the following method steps:

a) recording two or more diagnostic image data records (1, 3, 4, 5) of the object;

b) defining an imaging specification for imaging the image data (1, 3, 4, 5) onto a two-dimensional display plane (8), wherein in order to define the imaging specification anatomical features (2) of the object are identified in at least one of the image data records (1);

c) calculating a combined two-dimensional representation by imaging the two or more image data records (1, 3, 4, 5) according to the previously defined imaging specification onto the common display plane (8).

2. A method as claimed in claim 1, wherein in order to define the imaging specification an object volume (7) delimited by a curved surface is determined in which the anatomical features (2) of the object that are to be identified are contained.

3. A method as claimed in claim 2, wherein according to the imaging specification a projection of the image information of the data records (1, 3, 4, 5) that is contained in the object volume (7) is calculated during the calculation of the two-dimensional representation.

4. A method as claimed in claim 3, wherein in order to calculate the two-dimensional representation Cartesian coordinates within the display plane (8) are assigned to non-Cartesian surface coordinates ( $U, \varphi$ ) of the object volume (7).

5. A method as claimed in any of claims 1 to 4, wherein at least one image data record comprises morphological image information of the anatomical object and at least one further image data record (3, 4, 5) comprises functional image information relating to the anatomical object.

6. A method as claimed in claim 5, wherein the functional image information is obtained by evaluating temporal sequences of morphological image data of the anatomical object.

5 7. A method as claimed in any of claims 1 to 6, wherein at least one of the image data records (3, 4, 5) comprises at least one slice image of the anatomical object.

8. A method as claimed in any of claims 1 to 7, wherein the image data records are recorded by means of computer tomography, magnetic resonance or ultrasound.

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9. A method as claimed in any of claims 1 to 8, wherein the image data records are recorded using different imaging modes.

10. A diagnostic imaging device with recording means (18, 20) for recording  
15 three-dimensional image data records of an anatomical object (2), and with computer means (16, 21) for visualizing the image data, wherein the computer means (16, 21) have program control, by means of which a method as claimed in any of claims 1 to 9 can be carried out.

11. A computer program for a diagnostic imaging device, wherein a method as  
20 claimed in any of claims 1 to 9 is implemented by the computer program on the computer means (16, 21) of the imaging device.